THE UNITED STATES *v.* SOCIÉTÉ ANONYME DES ANCIENS ETABLISSEMENTS CAIL.

SOCIÉTÉ ANONYME DES ANCIENS ETABLISSEMENTS CAIL *v.* UNITED STATES.

APPEALS FROM THE COURT OF CLAIMS.

Nos. 209, 210. Argued March 12, 13, 1912.—Decided April 8, 1912.

In order to find that there was an implied contract for use of a patent, there must be use with patentee's assent and agreement to pay something therefor, *United States* v. *Berdan Fire Arms Company*, 156 U. S. 552, and these elements may be collected from conduct of the parties, even if there are no explicit declarations.

Where the facts show that the patentee consented that the Government use his invention, and the proper officers of the Department in which it was used have stated that there is a claim for royalties if the patent is a valid one, the claim is founded on contract and the Court of Claims has jurisdiction.

The intention to plainly do a wrongful act by deliberately taking the property of another without compensation will not be imputed to officers of the United States without the most convincing proof.

The excellence of an ordnance invention is testified to by its use by the Government in guns for the national defense.

In this case, *held* that the De Bange gas check for large guns is a device of excellence, that the patents therefor are valid, and the gas checking device used by the Government is an infringement thereof.

The law secures the patentee against infringement by a use in other forms and proportions than those specifically described in the claims.

This court will not direct the Court of Claims to certify evidence and not its conclusions from the evidence. The rule is that the finding must be of the facts established by the evidence.

This court, in appeals from the Court of Claims, can only act upon the record; and a finding of that court that a definite amount of compensation is due from the Government for use of a patent, to which no objection is taken or exception reserved, is as finally determinative of the matter, as a special verdict of a jury. The evidence cannot be certified up so as to make such finding reviewable by this court. *United States* v. *New York Indians*, 173 U. S. 464, followed, and *Ceballos & Co.* v. *United States*, 214 U. S. 47, distinguished.

44 Ct. Cl. 610, affirmed.

THE facts, which involve the jurisdiction of the Court of Claims of claims of patentee of the De Bange gas check for use of that invention by the Government, whether there was such use and what the proper compensation should be therefor, are stated in the opinion.

Mr. Assistant Attorney General John Q. Thompson and *Mr. Malcolm A. Coles* for the United States.

Mr. Philip Mauro and *Mr. T. D. Merwin*, for appellee in No. 209 and appellant in No. 210.

MR. JUSTICE MCKENNA delivered the opinion of the court.

This suit is for royalties alleged to be due for the use by the Government of a certain patented invention known as a "gas check" or "obturator," a device applied to breech-loading cannon to prevent the escape of gas.

The Court of Claims rendered judgment against the United States for the sum of $136,000. Both parties appeal, the United States contending against any judgment, the claimant contending for the recovery of a larger sum. No further distinction is necessary to be observed between the appeals. The discussion of the case will dispose of both.

The first contention of the Government is that the facts

set out in the findings did not constitute an implied contract in fact as distinguished from a tort, and that, therefore, the Court of Claims had no jurisdiction of the case.

Such a contract is necessary to sustain the exercise of jurisdiction. *Russell* v. *United States*, 182 U. S. 516, and cases cited. The Court of Claims decided that such a contract existed and that the jurisdiction of the court was established, citing *United States* v. *Berdan Fire Arms Mfg. Company*, 156 U. S. 552. The court said: "The findings disclose an invitation to present the details of the patent to the defendant [the Government], its examination by a board of officers appointed to investigate such inventions, and its final use without the slightest claim of ownership. Nothing appears to show an intention to dispute claimant's title to the patent, hence an implied contract arose to pay for such use."

In discussing the correctness of these conclusions we necessarily assume the validity of the patent, its utility and use by the Government, the question being only for the present whether such use was a trespass upon the rights of the claimant, or in concession of such rights and of an obligation to pay for them.

The findings lack, and, it may be, necessarily lack, definiteness. They trace the history and progress of the invention of gas checks from an early period to the culmination in the patent to Colonel De Bange, an officer of the French army, in 1884, granted upon an application made in 1883. It immediately attracted the notice of American army and naval officers and received favorable commendation in ordnance notes.

In 1883, under an act of Congress of that year (March 3, 1883, 22 Stat. 472, 474), a board was constituted known as the "Gun Foundry Board," composed of eminent officers of the army and navy, headed by Rear Admiral Simpson of the navy, whose duty it was, among others, as it is recited in the findings, to report on the establish-

ment of a Government foundry, "'or what other method, if any, should be adopted for the manufacture of heavy ordnance adapted to modern warfare, for the use of the army and navy of the United States.'"

The board visited the claimant's works at Paris on June 29, 1883. "In the official report of this board reference is made to a visit to the claimant's works at Paris, France, on August 29, 1883, and to the inspection by said board of the De Bange system of ordnance. In the said report of said board is the following:

"'*Breech fermeture.*—All the French guns are breech-loading, and are fitted with the interrupted screw system, as modified by Colonel De Bange to suit his gas check.

"'*Gas check.*—The De Bange gas check is universally employed.'"

Prior to the visit of the Gun Foundry Board the De Bange obturator was brought directly to the attention of the United States ordnance authorities through Lieutenant Commander Chadwick, naval attaché at London, to whom De Bange explained his invention and who gave to Lieutenant Commander Folger of the Bureau of Ordnance, Navy Department, a detailed description of the gas check, with a description of the method of making it, furnished by De Bange, subsequently (July 5, 1883) forwarding to the department the device, accompanied by the following letter:

"Sir: I have the honor to forward herewith a De Bange 'obturator,' which was kindly presented on request by the French minister of war.

"I am, very respectfully, your obedient servant,

F. E. Chadwick,

Lt. Comdr., U. S. Navy, Naval Attaché.

"Commodore J. E. Walker,

U. S. Navy, Chief of Bureau of Navigation,

Navy Department, Washington."

In 1884 the ordnance officers of the United States, after experimenting with the De Bange device, adopted it for heavy ordnance (5-inch caliber and upward) and have used no other device since.

"The United States Government [we quote from the findings] has never disputed the title of claimant's assignor, Colonel De Bange, as inventor of the said invention; but, on the contrary, the said invention has, ever since its adoption, been known in the service of the United States as the 'De Bange gas check,' and is described by that name in the official reports of the Secretaries of War and of the Navy."

The findings contain certain correspondence which is relied on by the Government to sustain its contention, and, as it is not possible to condense it, it is given in full:

"PARIS, *June 29, 1891.*

Colonel De Bange to H. E., the Minister Plenipotentiary of the United States.

"MR. MINISTER: In order to respond to the desire expressed by your excellency in the letter which you have done me the honor to address to me, I add some details to my previous observations.

"One of my patents bears the number 331,618; it relates to gun carriages; it is not very important because one can do without it; but the second, No. 301,220, which is connected with the obturation of guns and breech mechanism is of the highest importance. Without my obturator the loading of a gun by the breech is difficult and the service is rendered ineffectual. The metallic ring used in Germany is far from having its value and imparts to the gun a considerable inferiority. Thus all the makers of cannon are led to employ my invention, either openly or in a disguised form, styled by them improvement. The War and Navy Departments at New York, which are well acquainted with the question, will certainly not contest

the truth of my assertions; they have under their eyes, on trial, guns which speak for themselves.

"This is not the first time that I have had to complain of my idea being borrowed without my knowledge in France or abroad. The English Government particularly had taken up my system, and without my having demanded anything had offered me twenty thousand pounds sterling to indemnify me. I refused this offer, it is true, but because as a French officer I ought not to aid in the arming of a power which I do not consider as friendly. In part, deprived of my assistance, England has copied me badly and possesses but a moderate artillery.

"In any case, I appeal to the sentiments of equity of the Government of the United States, convinced that it will recognize easily the justice of my claim.

"Pray accept, &c., &c.,

(Sgd.) Colonel De Bange.

"United States Legation,
Naval Attaché,
Paris, July 2nd 1891.

The Naval Attaché at London suggested in a communication to Mr. Reid, our Minister there, that Colonel De Bange's letter be forwarded to the Navy Department. The Minister, however, referred it to the Secretary of State.

De Bange sent the following letter to the Secretary of the Navy:

"Versailles, near Paris, 16/8/91.

"*Colonel De Bange to Monsieur Benjamin F. Tracy, Secretary of the Navy at Washington.*

"Mr. Secretary: Some months ago I addressed the United States minister at Paris, verbally and by writing, several remarks on the subject of loans which I had made of my invention to the departments of War and of the Navy; finally, as I have undertaken to write to you directly, I now have the honor to lay before you the following:

"I had taken out letters patent, which treated of artillery in the United States, one number, 301,220, relative to l'obturation of guns, and of principal importance; the other number, 331,618, relative to the carriage.

"Furthermore, I have seen at Paris many of your officers to whom I furnished without reserve all the information which they have asked of me.

"Under these circumstances I hope that if the Government has desired to utilize my inventions, it will inform me; there has been no defect, and I have learned from a reliable source that my system was copied, unknown to me, by the departments of War and of the Navy, be it under the disguise of an improvement or be it openly.

"I regret that this has occurred, but in any case I consider that an indemnity is due me. If you will have the kindness to notify the Government of my claim, I am confident that it will see that justice is accorded me in the indemnity to which I believe myself to be entitled.

"Please accept, Mr. Secretary, the expression of sentiments of highest consideration, with which I am

"Your obedient servant,

"De Bange.

"Please reply.

This letter seems also to have been sent to the Department of State and referrred by it to the Secretary of the Navy, as appears from the following letter of the Chief of the Bureau of Ordnance:

"Bureau of Ordnance, *August 27, 1891.*

"Respectfully returned to the honorable Secretary of the Navy.

"The bureau has not manufactured and is not using any gun carriages which contain principles which could be held as infringing any claims secured in United States patent No. 331,618. The gas check which has been adopted for the naval guns of 6-in. calibre and upwards

resembles in certain features that described in United States patent No. 301,220, issued to Col. De Bange. It also differs from it materially in particulars which are original in this bureau.

"I am not in position to give an opinion as to the question of infringement, and have to suggest that the applicant refer the matter to the Court of Claims.

"The bureau will note for the information of the applicant that there are no funds appropriated or available for the payment of any claim that might be allowed by the Court of Claims, and that it will be necessary for the applicant to go to Congress for relief in the event of a decision being obtained which will warrant such action.

(Sgd.) WM. M. FOLGER,
Chief Bureau of Ordnance."

The Navy Department then addressed the Secretary of State as follows:

"NAVY DEPARTMENT,
"*Washington, September 3, 1891.*

"SIR: I have the honor to acknowledge the receipt of your communication of the 20th ultimo, enclosing copies of correspondence relating to a claim of Colonel De Bange, a retired officer of the French army, residing in Paris, France, who alleges the use by this Government of certain inventions patented by him in guns and gun carriages.

"In reply I have to state that the Chief of the Bureau of Ordnance, in this department, to whom the communication and accompanying papers were referred, reports as follows:

"'The bureau has not manufactured, and is not using, any gun carriages which contain principles which could be held as infringing any claims described in U. S. patent No. 331,618.

"'The gas check which has been adopted for the naval guns of 6-inch calibre and upwards resembles in certain

features that described in U. S. patent 301,220, issued to Colonel De Bange. It also differs from it materially in particulars which were original in this bureau.'

"In view of the statement made by the Chief of the Bureau of Ordnance, there appears to be no proper ground for the claim of Colonel De Bange.

"Very respectfully,

F. M. RAMSEY,

"Acting Secretary of the Navy.

"The Honorable the SECRETARY OF STATE."

On January 31, 1894, the claimant, by its attorneys addressed substantially similar letters to the Secretary of War and the Secretary of the Navy, stating its claim for the use of its patented invention and requesting payment for the use of it. The letters described and extolled the device and stated that they "deemed it expedient to take a low average price and apply it to all guns." They fixed such price at $200 per gun.

The Secretary of the Navy, on February 10, 1894, in replying, referred to and quoted from the department's letter of August 20, 1891, and added: "As the status of the case has not been changed since the date of the department's letter above mentioned, and as the matter has been previously disposed of by the department, no further consideration of the case appears to be required."

The letter of the claimant's attorneys, however, was the subject of a report and recommendation by the Chief of Bureau of Ordnance, which resulted in the following letters:

"BUREAU OF ORDNANCE,

December 4, 1894.

"Respectfully returned to the department.

"The gas check applied to guns constructed for the navy is that illustrated in United States Letters Patent No. 318,093, of May 10, 1885, and so far as this patent

is valid no royalties should be paid. (See Court of Claims Reports, p. 334, vol. 23, 1887–88.) If, however, as the bureau believes to be the case, the above-mentioned patent is only valid so far as it covers improvements on the De Bange patent (No. 301,220, of July 1, 1884), then, so far as the latter patent is valid, the within claim for royalties, in the bureau's opinion, is a proper one, and would be maintained by the courts.

"It must be noted, however, that until recently there has been no authority of law for the payment of royalties out of the naval appropriations, and the manufacture of most of the gas checks in question had been completed prior to the legislation giving such authority. Moreover, the bureau is of opinion that the Davis patent (No. 318,093, of May 19, 1885) covers real and important improvements, without which it is doubtful if the De Bange system would have been adopted for United States naval guns, and consequently it will be necessary to decide as to the relative values of the device in its original and improved forms. The fact that practically the same gas check is in use in all United States army guns of recent construction, and is being applied to guns now being made by the Bethlehem Iron Company, under contract with the War Department, should also be considered, since independent action on the part of the Navy Department might easily be against the interests of the Government.

"It is therefore recommended that an investigation be made in regard to the De Bange patent, and if this patent is concluded to be valid that the War Department be consulted as to whether a definite sum, to be fixed upon either by a board or in some other way, should not be offered the claimants for the right on the part of the Government to use the device in question on all its guns.

"W. T. SAMPSON.

"*Chief of Bureau of Ordnance.*"

The final action of the Navy Department upon petitioner's claim was communicated to the petitioner in a letter of the Secretary of the Navy, dated December 31, 1894, as follows:

"NAVY DEPARTMENT,
"*Washington, December 31, 1894.*

"GENTLEMEN: The department has carefully considered the questions presented in the brief filed by you, as well as in former correspondence, relative to the matter of the claim of the Société Anonyme des Anciens Etablissements Cail for compensation for the use by the United States of a gas check invented by Col. Charles T. W. V. De Bange, of the French army.

"It appears that the matter is now in such a condition that it will in all probability involve not only questions arising under the patent issued to Colonel De Bange, but also those growing out of the claims and affecting the rights of other patentees. Under these circumstances the department is of opinion that the full consideration and determination of these questions can be more certainly and equitably reached and the rights of all the parties concerned, as well as the Government, more definitely ascertained and assured through the medium of a court of justice. It is therefore suggested that the necessary proceedings for the consideration and adjustment of the matter by the Court of Claims be instituted.

"Very respectfully,
"H. A. HERBERT, *Secretary.*

"Messrs. POLLOCK & MAURO,
"*Attorneys at Law, Washington, D. C.*"

The final action of the War Department was communicated to claimant's attorneys in a letter dated January 14, 1895, in which the language and suggestion of the Secretary of the Navy were adopted substantially verbatim.

It is not possible to review the arguments by which the claimant asserts and the Government denies the sufficiency of the facts as we have related them to constitute an implied contract between the claimant and the Government. The ultimate contention of the Government is that the mere use of the patentee's invention with his knowledge does not create an implied contract in fact to pay for such use, but "there must be (1) a use of it with the patentee's assent, and there must *also* be (2) an *agreement* or *meeting of minds* on the part of the patentee and on the part of the user *as to compensation for the use*, even though the amount of the compensation be not fixed." These elements, it is insisted, were present in the *Berdan Case*, which we have seen was relied on by the Court of Claims; they are, it is further insisted, absent in the case at bar.

But these elements do not have to appear by the explicit declaration of the parties. They may be collected from their conduct. The alternative of a contract is important to be kept in mind. The officers of the Government knew of the De Bange invention and were aware of its great importance, and the purpose to deliberately take property of another without the intention that he should be compensated—in other words, to do plainly a wrongful act—cannot be imputed to them without the most convincing proof. Such proof does not exist in the present case. On the contrary, the record shows that compensation was contemplated. There was doubt as to the extent of it because there was doubt as to how far the devices used were attributable to or belonged to De Bange or whether they constituted an infringement of his patent, and therefore there was hesitancy and doubt, not as to compensation, but as to the amount and extent of it.

We agree with the Court of Claims that there is resemblance between this case and the *Berdan Case*. In that case the court had no difficulty in adducing the assent of Berdan to the use of his invention. The court

found more difficulty in inferring the assent of the Government. The court said, by Mr. Justice Brewer: "While the findings are not specific and emphatic as to the assent of the Government to the terms of any contract, yet we think they are sufficient. There was certainly no denial of the patentee's rights to the invention; no assertion on the part of the Government that the patent was wrongfully issued; no claim of the right to use the invention regardless of the patent; no disregard of all claims of the patentee, and no use in spite of protest or remonstrance. Negatively, at least, the findings are clear. The Government used the invention with the consent and express permission of the owner, and it did not, while so using it, repudiate the title of such owner."

Like comment may be made of the facts in the case at bar. It is true that the letter of William F. Folger, Chief of the Bureau of Ordnance, stated that while the gas check used by the Government resembled in certain features De Bange's gas check, it differed from it materially in particulars which were original in the bureau. But this was not a denial of the use or the utility of De Bange's invention. Whether there was infringement the officer did not decide, but suggested that the "applicant refer the matter to the Court of Claims." Subsequently the Acting Secretary of the Navy did deny infringement. But that position was abandoned and the Secretaries of War and the Navy "suggested that the necessary proceedings for the consideration of the adjustment of the matter by the Court of Claims be instituted." There were parallel circumstances in the *Berdan Case*.

The invention of Berdan was an "extractor-ejector" for use in breech-loading rifles, and that which was used by the Government was devised by one of its employés. There was a difference between it and Berdan's device, but the officers of the Government doubted if the difference was material, and concluded that it was a mat-

ter for the courts to decide. It is true there was no a sertion of right against the Berdan device in consequen of the difference between it and the device used by th Government as, it may be said, there was in the case bar by the letter of Admiral Ramsey of September 3, 189 But the position taken in that letter was, as we have see abandoned, and it was declared that so far as the De Bang patent was valid its claim for royalties was, in the opinio of the Bureau of Ordnance, a proper one and would b sustained by the courts. This was in 1894. Prior to tha time and afterwards the Government continued to use th device. We think the Court of Claims had jurisdictio

The Government contends that it has not infringe the De Bange patent. Infringement is a question of fac and as an aid to its solution courts are furnished usuall with an expert comparison of the contending device their identity or difference of construction and modes operation. This record is destitute of such testimon The Government contends for the very narrow constru tion of the patent based on its claims and the prior ar The only proof of the prior art, however, is a reference t thirteen or fourteen patents by number and patente some of which are English, some French and some Amer can. The only explanation of them is in the argumen of counsel and an exhibition of the patents. It is ver doubtful if we may take notice of even the America patents; more doubtful if we may of the foreign one We, however, have considered counsel's explanation c them. They reveal nothing material to be considere that the findings of the Court of Claims do not show c the prior art and the progress from its failure to the suc cess of the De Bange invention, a success, it may be con ceded, that availed itself of all that the prior art demon strated, but went beyond it to the fulfillment that it ha not achieved.

The necessity of a gas check to the success of breech

loading guns all could see, and what a device, to be successful, must do; but the world struggled a long time with the problem, and that problem was to find something which would stand the intense heat generated and the great force caused by the explosion of the powder in a high power gun and the backward escape of the resultant gas under the enormous pressure exerted, and this not in one service of the gun, but in many services. The experiments are detailed in the findings. Metallic cups were tried and paper cups. As early as 1858 India rubber was suggested. Its elasticity, it was thought, would afford all that was necessary for a complete automatic obturation, the gas by its expansion "to seal its own escape."

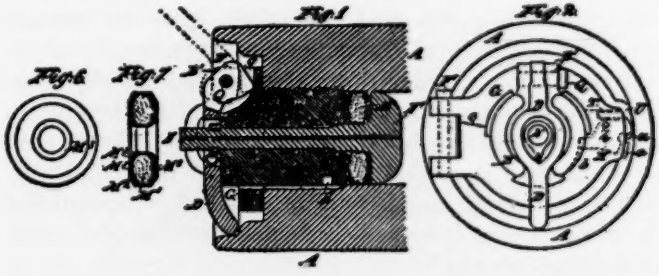
Rubber had some success when constructed in rings of varying degrees of suppleness and hardness, and seemed to have settled the problem. But defects subsequently developed and experiments continued for something better and which would fulfill all the conditions. Then soap obturators were tried, and finally Colonel De Bange's invention of tallow and asbestos. If our purpose was speculative, not practical, we might pause to wonder how such substances could produce such results under the conditions to which they are subjected, and by wondering we express in a way the quality of the invention. We are told by the findings of the Court of Claims that a gas check "is subject to a pressure of from 30,000 to 40,000 pounds per square inch, to very high temperatures, to the effects of corrosive gases, and the effects of rapid and violent shocks."

We need not, however, dwell longer on the excellence of the invention. The Government has testified to its excellence by using it in the guns intended for the national defense.

But it is contended that the claim of the patent is for a specific combination of elements and that that combination of elements is not used by the Government.

This contention is based upon what is considered to be the proper construction of claim 1 of the patent, a strict construction being urged of it—indeed, as we understand the argument, the claim must be confined to the specific forms of its elements, giving the widest latitude to imitation.

The patent answers the contention. Describing his invention, De Bange calls it "certain new and useful improvements in breech-loading guns." Specifying the improvements, he says that they "apply to breech-loading guns which employ a screw-plug having its threads interrupted." Further specifying, he adds: "I have devised a system of packing placed in advance of the plug, and which is expanded by the force of the explosion of the powder to make a tight joint to prevent the leakage of gas." He declares the drawings form a part of the specification and represent what he considers the best means of carrying out the invention. It is only necessary to give Figures 1, 2, 6 and 7.



They are described in the patent as follows: "Figure 1 is a central longitudinal section. The strong lines show the parts ready for firing. The dotted lines show the transverse lever in a position for conveniently operating to turn the screw-plug. Fig. 2 is a rear view showing the parts locked. Fig. 3 is a corresponding view showing

the parts unlocked. . . . Figs. 6 and 7 represent the packing-ring detached. Fig. 6 is a face view, and Fig. 7 a section in the plane of the axis." The specification then proceeds as follows:

"A liberal hole in the line of the axis of the screw-plug B carries a stout sliding pin, N, at the extreme front of which is a stout head, N'. The portion of the body adjacent to the head N' is slightly enlarged. The head N' is adapted to receive the force of the powder at the discharge. At the moment of the discharge this head moves backward, compressing a relatively soft and expansible packing-ring, M, behind it. Certain portions of this ring will be distinguished, when necessary, by additional marks, as M' M^2. The body M' of this packing is of asbestos saturated with tallow, and affords a sufficiently yielding mass with the required capacity for enduring heat and for withstanding the very strong compressive force to which it is subjected by the discharge. It is inclosed between two thin shells, M^2 M^2, of copper, one fitting the body M' on the inner and the other on the outer side, and nearly incasing the entire packing. Both the body M' and the copper M^2 are then inclosed between two strong shells of brass, M^3 M^3. The entire packing thus made is adapted to maintain its form, but to allow a small amount of radial expansion sufficient to pack the joint tightly against the escape of gas. This expansion is due to two causes—the tapering form of the front end of the pin N, which acts on the interior of the packing, and the powerful compression received from the head N'. The expansion from one or both causes is sufficient to press the exterior of the copper M^2 tightly against the interior of the gun, thus effectually preventing any leakage of gas."

Claim 1 is the important one and is as follows:

"1. The partially-threaded plug B, headed pin N N', extending through said plug, and the yielding packing M,

arranged between the head N′ and the inner end of the plug, in combination with each other and with the gun A, arranged as shown, to allow the pin to be driven rearward and compress the packing, as herein specified."

It will be observed, therefore, that De Bange declared that what he devised was a "system of packing" which by the force of the explosion of the powder is expanded to make a tight joint to prevent the leakage of gas. The mechanical parts are but aids to this result, securing in place the packing and enabling its qualities to operate, enabling it to maintain its form but to allow radial expansion sufficient "to pack the joint tightly against the escape of gas." This expansion has also the effect of pressing "the copper (M^2)" against the interior of the gun and coöperates to prevent the leakage of gas.

That this packing constitutes the very essence of the invention is declared in all of the literature on the subject and recognized in all of the Government publications. The Government now contends for a limitation of it, and insists that it consists of "a yielding packing M," exactly as described, although the description is declared by De Bange to represent "the best means of carrying out his invention," and he declares also that "modifications could be used in the forms and proportions."

We cannot therefore assent to the contention of the Government, and in rejecting it we do not render "the claim elastic and indefinite where it should be certain." We preserve that which was declared to be and which has always been recognized to be the invention, and by those competent to declare, whose duty it was to comprehend and estimate, not only the result achieved but by what achieved.

In the description furnished by De Bange to Commander Chadwick a covering of cloth is described. The description in the Ordnance Notes of April 20, 1883, mentions "plates of tin, strengthened at the edges by thin brass

rings." Another description speaks of "a metallic split ring." These are but details. As said by the Court of Claims, through Booth, J., "The invention described by the language of the claim was the yielding pad of asbestos and tallow." And this, the learned Judge also said, predominates as the one "central idea" in every description of the patent in either the specifications or claim.

We learn from the court that it heard much expert testimony, and in its opinion it considers two subsequent patents expressed to be improvements on the De Bange patent. One of these was issued to James B. Davis and the other to Gregory Gerdom. The difference between them and the De Bange patent was commented on, and it was said that the record disclosed that in all inventions subsequent to De Bange's "the pad of asbestos and tallow is the functioning element of the device, without which its utility is as nothing," and that a pad of that composition supplied "the necessary expansion, indispensable to forward the operation of both the Davis and Gerdom patents. The United States used the Gerdom patent and paid him substantial royalities for its use."

It would seem, therefore, that the contention of the Government turns upon a question of fact found against it by the court below; that is, it was found that the particular envelope of the tallow and asbestos pad were not essential features of De Bange's invention, and that the substitution of steel rings for brass rings could be an infringement of the invention. As said by counsel for claimant, claim 1 "does not recite among its elements the materials whereof the envelope [of the pad] and rings are made. . . . It is, on the contrary, obvious that any suitable material may be used for these subsidiary parts." It is conceded that the pliable copper envelope (M^2) may be properly regarded as a part of the "yielding packing." The patentee so states, but he does not say that the "strong shells of brass M^3 M^3 are parts" of it.

It would indeed be arbitrary, as said by claimant, to read into the claim the specific metal of which those shells are composed "for no other purpose than to render it [the claim] worthless."

We have seen De Bange describe what he conceived to be the best form of his invention, and contemplated that it could be represented in other forms and proportions. This, however, was unnecessary, for the law would secure him against imitation by other forms and proportions. *Winans* v. *Denmead*, 15 How. 330; *Hotchkiss* v. *Greenwood*, 11 How. 248, 265; *Western Electric Co.* v. *La Rue*, 139 U. S. 601, 608.

We think, therefore, that the Court of Claims rightfully decided the question of infringement against the Government.

The cross-appeal of claimant is directed to the question of damages.

In the original petition filed by it on January 31, 1895, damages were laid at $140,000. There was no traverse filed until October, 1907. An amended petition was filed April 12, 1909, and judgment was prayed for $1,447,667.98. In this petition it was alleged that the invention was used upon 1,518 guns of various calibers within the six years next preceding the filing of the original petition, the number which was used by the army and that used by the navy being given. The total cost of the guns was stated to be $18,226,263. There is no finding responding to these allegations. The opinion of the court was filed December 2, 1907, that is, before the filing of the amended petition. The opinion contains the following statement: "There is no testimony in the record upon which the quantum of damages can be predicated. The measure of damages would be the value of the device to the defendants. Following the precedents heretofore established, the case will stand upon the docket, with leave to furnish testimony upon this point."

On the twentieth of May, 1909, judgment was rendered for claimant in the sum of $136,000. Each party moved for an amendment to the findings, which were overruled in part and allowed in part. The former findings were withdrawn and amended findings of fact filed. No exception appears to have been taken to this action. Indeed, the record does not furnish us with a comparison between the findings which were withdrawn and those filed. There is nothing to show upon what the court's ruling was invoked.

A motion was presented to this court April 25, 1910, to remand the case to the Court of Claims, and that that court be instructed to find and certify as matters of fact, in addition to the facts found, in regard to the cost of the guns in which the De Bange obturators were used, the amount the Government paid or contracted to pay for patented improvements in breech-loading mechanism for ordnance, and whether there appears in the record the testimony of experts as to the value of the De Bange device, or what would be a reasonable compensation for its use, and, if so, to state the amounts of such estimates.

It was further moved that the Court of Claims be instructed to strike out certain matters in the findings which were described to be evidentiary. The motion was postponed to the hearing, and is now to be considered. The motion is, in effect, for a direction to the Court of Claims to certify the evidence to this court, and not its conclusions from the evidence. This is clearly in contravention of the rule of this court which requires the record on appeal from the Court of Claims to contain a finding by the court "of the facts in the case established by the evidence in the nature of a special verdict, but not the evidence establishing it."

Besides, as we have seen, the record does not disclose what ruling was invoked. We can only act upon the

record, and that shows a finding of the court upon the question of compensation, to which finding there was no objection taken nor exception reserved. The finding determines the matter, being in the nature of a special verdict of a jury. *United States* v. *New York Indians*, 173 U. S. 464.

Ceballos & Co. v. *United States*, 214 U. S. 47, is not applicable. There was a contract of which there could be no dispute, and therefore a motion to embrace it in the record from the Court of Claims was granted and the case reviewed in the light thereof.

The motion to remand the case is therefore denied.

Judgment affirmed.